

## CONTENTS OF VOLUME 90

### No. 1, October 1992

#### Editorial

1

#### Frontiers in Respiratory Physiology

- C. Poyart, H. Wajcman and J. Kister (France): Molecular adaptation of hemoglobin function in mammals*

3

#### Research Articles

- H. L. Manning, S. A. Shea, R. M. Schwartzstein, R. W. Lansing, R. Brown and R. B. Banzett (U.S.A.): Reduced tidal volume increases 'air hunger' at fixed  $P_{CO_2}$  in ventilated quadriplegics*

19

- F. L. Eldridge and Z. Chen (U.S.A.): Respiratory-associated rhythmic firing of midbrain neurons is modulated by vagal input*

31

- M. Maskrey, S. E. Evans, U. Mesch, N. A. Andersen and J. H. Sherrey (Australia): Phrenicotomy in the rat: Acute changes in blood gases, pH and body temperature*

47

- B.-P. Lee, G. Sant'Ambrogio and F. B. Sant'Ambrogio (U.S.A., Taiwan): Afferent innervation and receptors of the canine extrathoracic trachea*

55

- M. Mishima, K. Kawakami, N. Sugiura, K. Nishimura, N. Sakai, T. Fukunaga and K. Kuno (Japan): Phase differences between chest and mouth flows in patients suffering from pulmonary disease*

67

- G. A. Farkas (U.S.A.): Mechanical characteristics and functional length of canine expiratory muscles*

87

- Z. Chen, F. L. Eldridge and P. G. Wagner (U.S.A.): Respiratory-associated thalamic activity is related to level of respiratory drive*

99

- J. Kohl, U. Scholz, K. Glowicki and E. A. Koller (Switzerland): Discharge of pulmonary rapidly adapting stretch receptors during HFO ventilation*

115

- B. R. Williams, Jr. and D. L. Kilgore, Jr. (U.S.A.): Ontogenetic modification of the hypercapnic ventilatory response in the zebra finch*

125

### No. 2, November 1992

#### Announcement from the Publisher

iii

- G. M. Barnas, S. J. Fletcher, C. F. Mackenzie and C. Runcie (U.S.A.): Effects of cardiac oscillations on acinar gas mixing during pulmonary edema*

135

- D. P. J. Six, W. R. de Vries and S. C. M. Luijendijk (Netherlands): Collateral ventilation and the sloping alveolar plateaus of He and SF<sub>6</sub>: A model study*

145

- C. P. M. van der Grinten, W. R. de Vries and S. C. M. Luijendijk (Netherlands): Vagally mediated modification of inspiratory activity by changes in airway pressure*

159

- F. Murchal, A. Bairam, P. Haouzi, J. M. Hascoet, J. P. Crance, P. Vert and S. Lahiri (France): Dual responses of carotid chemosensory afferents to dopamine in the newborn kitten*

173

- D. R. Karius and A. L. Kunz (U.S.A.): Response of roosters to resistive loads at constant chemical drive to breathe*

185

- D. M. Caretti, P. C. Szlyk and I. V. Sils (U.S.A.): Effects of exercise modality on patterns of ventilation and respiratory timing*

201

- E. Balzamo, F. Lagier-Tessonner and Y. Jammes (France): Fatigue-induced changes in diaphragmatic afferents and cortical activity in the cat*

213

- H.-J. Meuer, V. Hartmann and S. Jopp (F.R.G.): Tissue  $P_{O_2}$  and growth rate in early chick embryos*

227

- R. Marthan, H. Crevel, H. Guénard and J.-P. Savineau (France): Responsiveness to histamine in human sensitized airway smooth muscle*

239

**No. 3, December 1992**

<i>J. B. Karlinsky (U.S.A.): Stress-strain characteristics of normal and emphysematous hamster lung strips</i>	251
<i>P. Dewachter, C. G. Saunier, C. Duvivier, R. Peslin and M.-C. Laxenaire (France): Changes in inspired gas composition and experimental bronchospasm in the rabbit</i>	261
<i>B. Suki and Z. Hantos (Hungary): Viscoelastic properties of the visceral pleura and its contribution to lung impedance</i>	271
<i>D. Bartlett, Jr., S. L. Knuth and M. J. Gdovin (U.S.A.): Influence of laryngeal CO<sub>2</sub> on respiratory activities of motor nerves to accessory muscles</i>	289
<i>J. Pizarro, M. M. Warner, M. Ryan, G. S. Mitchell and G. E. Bisgard (U.S.A.): Intracarotid norepinephrine infusions inhibit ventilation in goats</i>	299
<i>C. McParland, B. Krishnan, J. Lobo and C. G. Gallagher (Canada): Effect of physical training on breathing pattern during progressive exercise</i>	311
<i>S. C. Hemplerman, F. L. Powell and G. K. Prisk (U.S.A.): Avian arterial chemoreceptor responses to steps of CO<sub>2</sub> and O<sub>2</sub></i>	325
<i>B. Pelster, P. Scheid and R. B. Reeves (Germany, U.S.A.): Kinetics of the Root effect and of O<sub>2</sub> exchange in whole blood of the eel</i>	341
<i>K. Uchida, K. Matsuyama, K. Tanaka and K. Doi (Japan): Diffusion coefficient for O<sub>2</sub> in plasma and mitochondrial membranes of rat cardiomyocytes</i>	351
<i>W. E. Truog, J. C. Jackson, T. A. Standaert, S. E. Juul, J. H. Murphy, W. A. Hodson and W. R. Henderson, Jr. (U.S.A.): Acute changes in vasoactive lipid mediators in experimental hyaline membrane disease</i>	363
<i>H. Burnet, M. Reynaud-Gaubert, M. Lucciano and Y. Jammes (France): Relationship between inspired and expired gas temperatures in a hyperbaric environment</i>	377
Guest Referees 1992	387
Author Index	389
Subject Index	393
Contents of Volume 90	397

